Marked Version of Claims   Appendix 1

29. (Currently Amended) ~~A data processing apparatus~~ An interactive electronic cargo option exchange for cargo service providers to manage cargo ~~space~~ freight fees ~~risk in an interactive electronic exchange between~~ registered users and cargo service providers ~~by~~ electronically determining the price for ~~prising said risk as an option fee in accordance to the terms of~~ cargo option ~~a contract to secure the underlying cargo service at a pre-agreed final price within a preagreed future period, said priced contracts~~ and for existing cargo option may to ~~be~~ sold, bought and settled comprising:

a central controller including a CPU, database and a memory operatively connected to said CPU;

at least one service provider's cargo system including a CPU, ~~database~~ and a memory operatively connected to said CPU, said cargo system adapted for communicating with said central controller over a network;

~~wherein cargo system is connected to a database containing information including but not limited to cargo prices, customer information, route criteria, cargo space availability, cargo space sold, electronic option contracts with respective terms, transporter schedule, loading capacity, type of cargo, type of transporter and planning criteria, having means to update, delete, insert, search, select, match, identify, filter;~~

said memory in said cargo system containing a program means for calculating, selecting, ~~planning and~~ responding adapted to be executed by said cargo system's CPU;

a plurality of terminal devices, adapted for communicating with said central controller, for transmitting to said central controller user cargo shipping information ~~including but not limited to~~ comprising :~~final price payable~~ remaining payment , destination of cargo, arrival date of cargo, flexibility of arrival date, type of cargo, departure date, departure location and route criteria over a network;

wherein said cargo system calculating means uses at least, remaining payment ~~final price payable, weighted average cost of capital of service provider,~~ time period to provide service, current cargo service cost for a selected route to determine the base price, calculating standard deviation of cargo service price;

wherein said cargo system selecting means uses at least, destination of cargo, arrival date of cargo, flexibility of arrival date, type of cargo, departure date, departure location, weather conditions, loading capacity, demand for this type of cargo space, timing issues, cargo price and route criteria to determine availability of service;

~~wherein said cargo system planning means uses said selection and said base price to determine commercial suitability;~~

                                                            Page 3 of 20

Application number: 09/376381   Art Unit: 3628
Applicant: Khai Hee Kwan   Examiner: Debra F Charles.
Title: Method, apparatus and program for pricing, transferring, buying, selling and
exercising of freight cargo options on the World Wide Web.

wherein if ~~service is available~~ planning criteria is acceptable said cargo system
responding means to provide cargo pricing information to central controller ~~for further~~
~~acceptance;~~

said memory in said central controller containing a program to calculate cargo option
price, adapted to be executed by said CPU in response to cargo pricing information from
cargo system;

~~wherein said central controller calculating means uses current price as determined by~~
~~cargo system, current loading capacity of a chosen transporter, historical demand for this~~
~~type of cargo space, the standard deviation of cargo prices up to request time for this~~
~~service route, acceptable weather data on chosen departure and arrival date(s), data on~~
~~coincidence of departure date with any public holiday or weekends, the type of~~
~~transporter selected on this route and number of weeks before departure date, weighted~~
~~average cost of capital as provided by responsive cargo system also collectively known as~~
~~cargo information, flexibility factor and type of cargo, final price payable as provided by~~
~~user and number of competition on the same route as determined by the number of~~
~~responsive cargo systems ;~~

~~wherein said central controller is connected to at least one service providers' cargo~~
~~systems through a connecting means over a network;~~

wherein said central controller receives said user shipping information criteria from said
terminal and ~~uses said criteria to~~ query at least one service provider's cargo system over a
network;

~~wherein said central controller receives cargo information from said cargo system having~~
~~satisfies planning criteria in said system and matches said user's shipping information~~
~~criteria over a network;~~

wherein said central controller is connected to a database ~~containing but not limited to~~
comprising users account information, including past transaction records of any sale and
purchase of cargo option ~~contracts and commitment terms~~, cargo prices, user personal
details including banking accounts, transaction amounts, ~~watch list according to route,~~
type of cargo, transporter, departure destination, arrival destination, ~~alert conditions~~ said
accounts are protected by passwords and login sequence; and

said central controller having searching means to ~~search by means of stored conditions or~~
~~by alert conditions~~ match and rank existing cargo options set by user, means to display
with a graphic user interface and means to receive a user request input via said terminal
an offer for sale or buy cargo option, and means to receive ~~means to offer priced option~~
~~contracts and~~ cargo system service request which are posted ~~for sale and bids are placed~~

Page 4 of 20

Application number: 09/376381   Art Unit: 3628
Applicant: Khai Hee Kwan   Examiner: Debra F Charles.
Title: Method, apparatus and program for pricing, transferring, buying, selling and exercising of freight cargo options on the World Wide Web.

~~to attract buyers/sellers~~ for a predetermined period <u>accessible online</u> to other users, in ~~said database~~ <u>exchange</u>.

30. <u>(Currently Amended)</u> The ~~apparatus~~ <u>exchange</u> according to claim 29, wherein said program in said central controller's memory means to receive a user request input via said terminal device <u>to</u> ~~purchase or sell or settle the option contracts, search other contracts, offer for sale, offer to buy, means to redirect the selected offer back to the seller for final confirmation and further means to~~ perform a payment transaction through a nominated bank account to sell or buy the <u>posted cargo options on behalf</u> of <u>said user.</u> ~~contracts for the registered user and settled the same for provider or counterparty of said contracts.~~

31. <u>(Currently Amended)</u> The ~~apparatus~~ <u>exchange</u> according to claim ~~30~~ <u>29,</u> wherein said program in said <u>central controller's</u> memory means to receive a registered user request input via said terminal device to settle <u>user's</u> ~~a~~ cargo option contract and further means to perform a payment transaction through a nominated bank account to pay <u>cargo</u> service provider the <u>remaining payment</u> ~~final~~ ~~price payable for the contract~~ to secure the underlying contracted cargo services ~~in accordance with the terms of the contract~~ and further means to update both registered user's and service provider's accounts in the database.

32. <u>(Currently Amended)</u> A method <u>for cargo service</u> providers to request a <u>cargo option</u> ~~of electronically pricing a cargo option fee contract satisfying a fixed route and a final price and offering it,~~ the method comprising the steps of:

~~querying cargo price for a fixed route and type of cargo;~~
~~receiving the cargo price for a fixed route and type of cargo from central controller;~~
~~inputting final price payable, destination of cargo, arrival date of cargo, departure date, departure location, flexibility of arrival date, type of cargo, and route criteria to a central controller through a plurality of terminal devices, collectively known as shipping information via a terminal over a network by user;~~
~~querying service provider's cargo system based on above shipping information by user;~~

~~finding service provider's cargo system that accepts the user's shipping information where each cargo system have their own pre-set determination criteria such as but not limited to the minimum base price, acceptable weather conditions at departure and arrival points and dates based on flexibility factor, availability of cargo space on transporter for the type of cargo for the route in question that satisfy said user's information; on acceptance;~~

<u>receiving a request comprising cargo pricing information from</u> cargo system responding ~~with cargo information such as the leading~~ ~~capacity of the chosen transporter, type of selected transporter, historical demand rate for~~

Page 5 of 20

Application number: 09/376381   Art Unit: 3628
Applicant: Khai Hee Kwan   Examiner: Debra F Charles.
Title: Method, apparatus and program for pricing, transferring, buying, selling and exercising of freight cargo options on the World Wide Web.

~~this type of cargo space, the standard deviation of the freight price for this particular route, the forecasted weather on this particular route, timing of holiday period for date of departure, number of weeks before selected departure date(s), collectively known as cargo information~~ over a network;

~~sending the cargo information and base price to the central controller from each cargo system wishing to respond to the user's request;~~

~~combining the shipping information from said user, base price and cargo information from responding service provider's cargo system and determining the number of cargo providers competing in this request (s);~~

executing a program to calculate the <u>cargo option fee</u> ~~price based on different departure dates where available, one or more electronic option contract~~ that gives the ~~customer~~ <u>cargo service provider</u> ~~the~~ contractual right <u>but not obligation</u> to ~~secure~~ <u>sell</u> within a future period ~~said period~~ equal or less to the period before the ~~selected~~ departure date, the underlying cargo shipping services for a particular route <u>to the seller of said option</u> ~~, for a particular service provider and final~~ <u>at a particular price</u> ~~which satisfied the shipping information;~~ <u>and</u>

~~outputting~~ <u>posting</u> the cargo option ~~price~~ <u>fee or fees</u> ~~and corresponding option contract from each responding cargo service provider~~ to await user's response where such offer(s) are open <u>to all users</u> for a predetermined period.~~,~~

33. <u>(Currently Amended)</u> A computer implemented system for <u>determining cargo option price for freight services over a network</u> connected to a central controller linked ~~cargo service providers~~ <u>to a plurality of terminals</u> comprising:

~~to manage cargo space risk in an interactive electronic exchange between registered users and cargo service providers by electronically pricing said risk as a option fee in accordance to the terms of a~~
~~contract to secure the underlying cargo service at a pre-agreed final price within a preagreed future period, said priced contracts may be sold, bought and settled comprising:~~

<u>at least one cargo system :</u>

~~having an user input cargo shipping information;~~
~~having service provider's cargo system provide cargo information upon determining suitability of such input by user as transmitted by central controller;~~
having a CPU in service provider's cargo system;
having a memory in cargo system means connected to said CPU, said memory means containing a program adapted to be executed by said CPU;

Page 6 of 20

Application number: 09/376381   Art Unit: 3628
Applicant: Khai He Kwan   Examiner: Debra F Charles.
Title: Method, apparatus and program for pricing, transferring, buying, selling and exercising of freight cargo options on the World Wide Web.

having said CPU and memory in cargo system means to ~~calculate~~ determine cargo pricing information, ~~the base price and~~ determining ~~suitability of said base price and~~ the shipping information ~~inputted~~ by user and means to response cargo pricing information to central controller ~~if suitability is acceptable~~;

having a CPU in the central controller;
having a memory in central controller means connected to said CPU, said memory means containing a program adapted to be executed by said CPU;

~~having said CPU and memory means receive shipping information from user and cargo information from cargo system; and~~

having said CPU and memory in response to cargo pricing information received from at least one cargo system , means electronically calculate a cargo option ~~fee contract~~ price ~~that~~ wherein calculate is based at least in part on the formula below;

Cargo Option price = LC*D*L*C*R*V*W*Q*A*CO

where LC is the load capacity times the base price for the option, D is related to a desired number of weeks before departure date, L is concerning the cargo space demand on the requested route, C is concerning loyalty, R is concerning flexibility, V is concerning the standard deviation of the cargo prices, W is concerning the weather on the departure date, Q is for type of cargo including weight and dimensions , A is for type of carrier and CO is for number of competition on the same route; and

having said CPU and memory means outputting the cargo option price for consideration by user and update the database where said cargo option is available for predetermined period to other users if not selected by first user .

~~gives the customer the contractual right to secure within a future period said period equal or less to the period before the selected departure date, the underlying cargo shipping services for a particular route, for a particular service provider and final price which satisfied the shipping information.~~

34. (Currently Amended) The system according to claim 33, wherein shipping information comprising at least one of the first information concerning destination of cargo, second information concerning arrival date of cargo, third information concerning departure location, fourth information concerning departure date, fifth information concerning flexibility of arrival date and sixth information concerning type of cargo,

~~wherein said information is inputted and transmitted over a network.~~

Application number: 09/376381   Art Unit: 3628
Applicant: Khai Hee Kwan   Examiner: Debra F Charles.
Title: Method, apparatus and program for pricing, transferring, buying, selling and exercising of freight cargo options on the World Wide Web.

35. (Currently Amended) The system according to claim 33, wherein said cargo pricing information ~~cargo system receives information includes first information describing final price payable, second information describing destination of cargo, third information describing arrival date of cargo, fourth information describing the flexibility of arrival date, fifth information describing the type of cargo, sixth information describing the departure date of cargo, seventh information describing the departure location, eighth information describing the route criteria from user wherein said program in cargo system is further means to use at least one of said first information, said second information, said third information, said fourth information, said fifth information, said sixth information, said seventh information, said eighth information to calculate base price, determine planning, and commercial suitability; and wherein said central controller receives information includes~~ comprising: first information describing a number of weeks before departure, second information concerning the ~~historical~~ demand of this type of cargo space, ~~and~~ third information concerning the standard deviation of the ~~freight~~ cargo prices of ~~for~~ the said ~~route~~, ~~and~~ fourth information on the current cargo price, ~~and~~ fifth information on the flexibility of the cargo arrival date, sixth information on the loading capacity of the transporter ~~at the time of query~~, seventh information on the predicted weather prevailing on the date of departure and arrival, eighth information on the timing of the transporter, ninth information on the type of cargo, tenth information on the type of transporter selected, eleventh information on the route, ~~on the number of competition,~~ twelfth information on the remaining payment ~~final price payable~~, ~~thirteenth information on weighted average cost of capital of service provider and wherein said program in central controller is further means to use at least one of said first information, said second information, said third information, said fourth information, said fifth information, said sixth information, said seventh information, said eighth information, said ninth information, said tenth information, said eleventh information, said twelfth information, said thirteenth information to calculate the cargo service option fee.~~

36. (Currently Amended) The system according to claim 33, wherein central controller is an electronic cargo option exchange and whereby cargo is serviced by air, rail, sea or space carriers.

~~said computer program in said memory in central controller means updates a database to record the information of the relevant contractual parties in their respective accounts and said computer program in said memory in cargo system means to update a database to reserve cargo space pending settlement of option contract, loading capacity of chosen transporter, on the selected route and date(s).~~

37. (Currently Amended) The system according to claim 33, wherein the said program in said memory in central controller comprising :

means to receive a user request to settle user's cargo option;

Application number: 09/376381   Art Unit: 3628
Applicant: Khoi Hee Kwan   Examiner: Debra F Charles.
Title: Method, apparatus and program for pricing, transferring, buying, selling and
exercising of freight cargo options on the World Wide Web.

means to verify the validity of the cargo option;

means to perform a payment transaction to pay remaining payment to the cargo service
provider responsible for providing the cargo service; and

means to update the database to reflect the payment in settlement for cargo service in
both user and cargo service provider's accounts.

calculates the cargo option fee based at least in part on the formula:
a = Log(CP / FP) 35
b = (BR + 0.5 * SD ^ 2) * TY
c = SD * (TY ^ 0.5)
d1 = (a + b) / c
d2 = d1 - SD * (TY ^ 0.5)

Cargo Option Fee = (CP * SNorm(d1) - FP * Exp(-BR * TY) * SNorm(d2)) * L *
LD*R* W*T*Q*A*CO
Function SNorm(z)
c1 = 2.506628 45
c2 = 0.3193815
c3 = -0.3565638
c4 = 1.7814779
c5 = -1.821256
c6 = 1.3302744 s
If z > 0 Or z = 0 Then
w = 1
Else w = -1
End If
y = 1 / (1 + 0.2316419 * w * z) 10
SNorm = 0.5 + w * (0.5 - (Exp(-z * z / 2) / c1) * (y * (c2 + y * (c3 + y * (c4 + y *
(c5 + y * c6))))))
End Function
where L is the factor related to load capacity, TY in Years to departure, FP is the Final 15
Price Payable, BR is the Borrowing Rate of service provider, LD is a factor concerning
the historical demand for this type of cargo space, R is a factor concerning flexibility of
cargo arrival date, SD is the instantaneous standard deviation of the freight cargo prices
as measured in logarithmic returns, CP is the current cargo price, W is a factor
concerning the weather on the departure date and arrival date, T is a factor concerning
timing of departure date such as in holiday period or otherwise, Q is factor for type of
cargo including weight, dimensions, A is for type of transporter and CO is for number of
competition on the same route;

Application number: 09/376381   Art Unit: 3628
Applicant: Khai Hee Kwan   Examiner: Debra F Charles.
Title: Method, apparatus and program for pricing, transferring, buying, selling and
exercising of freight cargo options on the World Wide Web.

~~wherein the calculating step of said program in said memory in cargo system calculates
the standard deviation of the freight cargo prices or implicitly from actual transacted
option fee of similar terms; and
wherein the calculating step said program in said memory in cargo system calculates the
base price at least in part on the formula:~~

~~Base Price = (CP*(1-FP/CP))*((1+BR)^N)~~

~~Where CP is the current price of the cargo service for the route, FP is the final price
payable to settle the contract, BR is the Borrowing Rate in percentage divided by 100 and
N is number of weeks to providing service as a factor of year.~~

38. (Currently Amended) A method for user to ~~of quantifying cargo space risk by~~
electronically ~~pricing said risk as~~ determine a cargo option price ~~fee to purchase an
electronic option contract to be offered to buyers~~, the method comprising the steps of:

using a central controller having a CPU and memory means;

having a program stored in the memory means;

inputting departure date, arrival date, destination, departure location and ~~final~~ remaining
price ~~payable~~ payment ;

inputting type of cargo and flexibility of arrival date and route criteria information
provided by a user;

querying a plurality of carrier cargo systems based on user's input;

~~having the provider's cargo system check the acceptability of the base price as calculated
from the final price payable, weighted average cost of capital, time to provide service and
current cost of cargo services, check the available departure dates satisfying arrival dates
linking to the transporters, check the type of transporter available on this route, if
available select a transporter based on type of cargo criteria provider by user, check on
load capacity of the chosen transporter, check on cargo space availability on the chosen
transporter, historical demand for this type of cargo space, calculates the standard
deviation of cargo prices up to current time for this route, check the predicted weather on
selected departure date(s) and arrival date(s), check whether the departure date may
coincidence with any public holiday or weekends, calculates the number of weeks to
departure date(s)~~

if accepted by cargo system response with cargo pricing information to central controller
and;

in response to cargo pricing information, for each ~~different departure date(s) available~~
responding cargo system calculating the cargo option ~~fee~~ ~~contract~~ price that gives the

Application number: 09/376381   Art Unit: 3628
Applicant: Khai He Kwan   Examiner: Debra F Charles.
Title: Method, apparatus and program for pricing, transferring, buying, selling and
exercising of freight cargo options on the World Wide Web.

~~customer user~~ the contractual right ~~but not obligation~~ to secure within a future period said
period equal or less to the period before the selected departure date, the underlying cargo
shipping services for a particular route, for a particular service ~~provider and final price~~
which satisfied the user's shipping information and the cargo ~~pricing~~ information
provided by corresponding cargo system by having the CPU execute said program; ~~and~~

outputting ~~the cargo~~ option ~~fee price~~ to the user and update the database where said
~~priced cargo~~ option ~~contract is~~ available for predetermined period to other users if not
selected by first user; and

~~whereby cargo shipping services is by air, rail, sea or space transporters.~~

39. (Currently Amended) A method for ~~determining cargo option for freight services over
a network connected to a central controller linked to at least one service provider cargo
system and a plurality of terminals,~~ comprising the steps of :

~~cargo service providers to manage cargo space risk in an interactive
electronic exchange between registered users and cargo service providers by
electronically pricing said risk as a option fee in accordance to the terms of a contract to
secure the underlying cargo service at a pre-agreed final price within a pre-agreed future
period, said priced contracts may be sold, bought and settled comprising the steps of:
providing the cargo fee schedule for a fixed route and type of cargo to user;
receiving cargo shipping information from user in view of securing the services for the
particular route;~~

at the central controller:

~~sending said information to service providers' cargo systems;~~

~~querying said information for suitability by connected cargo systems;~~

in response to cargo pricing information received from provider's cargo systems ~~which
satisfy cargo shipping information;
and agreeable to provide such a service;~~

~~determining the number of responding cargo systems and~~ calculating the cargo option
price ~~fee contract that gives the customer the contractual right to secure within a future
period said
period equal or less to the period before the selected departure date, the underlying cargo
shipping services for a particular route, for a particular service provider and final price
which satisfied the shipping information above; and~~ wherein said calculating is based at
least in part on the formula below:

Application number: 09/376381   Art Unit: 3628
Applicant: Khai Hee Kwan   Examiner: Debra F Charles.
Title: Method, apparatus and program for pricing, transferring, buying, selling and exercising of freight cargo options on the World Wide Web.

Cargo Option price = LC*D*L*C*R*V*W*Q*A*CO

where LC is the load capacity times the base price for the option, D is related to a desired number of weeks before departure date, L is concerning the cargo space demand on the requested route, C is concerning loyalty, R is concerning flexibility, V is concerning the standard deviation of the cargo prices, W is concerning the weather on the departure date, Q is for type of cargo including weight and dimensions , A is for type of carrier and CO is for number of competition on the same route; and

outputting the cargo option fee price to the user and update the database where said priced cargo option contract is available for predetermined period to other users if not selected by first user.

40. (Currently Amended) The method according to claim 39, wherein the step of: includes the step of receiving user's cargo shipping information comprising at least one of the first information

receiving a query on the cargo fee for a fixed route and type of cargo from user; receiving cargo shipping requirements information includes final price payable, concerning destination of cargo, second information concerning arrival date of cargo, third information concerning departure location, fourth information concerning departure date, fifth information concerning flexibility of arrival date, sixth information concerning type of cargo and seventh information concerning route criteria provided by a registered user; and

a step querying at least one cargo system with said user's shipping information.

querying the above data with at least a carrier cargo system where cargo system calculates the base price from final price payable, weighted average cost of capital of service provider, time period to provide service, current cargo service cost for a selected route, satisfactory arrival date of cargo depending on flexibility factor, availability of transporter satisfying arrival and departure date(s), acceptable weather conditions for departure and arrival date(s); and

provided said queried data are acceptable to cargo system, said system receive cargo information includes current loading capacity of a chosen transporter, historical demand for this type of cargo space, calculating the current standard deviation of cargo prices up to request time for this service route, the base price, acceptable weather data on chosen departure and arrival date(s), data on the departure date may coincidence with any public holiday or weekends, the type of transporter selected on this route, the number of weeks to selected departure dates to central controller, and at central controller, determining the number of cargo systems that actually responded in order to calculate the option fee.

Application number: 09/376381   Art Unit: 3628
Applicant: Khai Hee Kwan   Examiner: Debra F Charles.
Title: Method, apparatus and program for pricing, transferring, buying, selling and exercising of freight cargo options on the World Wide Web.

41. (Currently Amended) The method according to claim 39, ~~further comprising the steps of:~~

~~wherein said cargo system receiving information includes first information describing final price payable, second information describing destination of cargo, third information describing arrival date of cargo, fourth information describing the flexibility of arrival date, fifth information describing the type of cargo, sixth information describing the departure date of cargo, seventh information describing the departure location, eighth information describing the route criteria from user wherein program in cargo system is further means to use at least one of first said information, said second information, said third information, said fourth information, said fifth information, said sixth information, said seventh information, said eighth information to calculate base price, determine planning, and commercial suitability; and~~

~~steps wherein~~ cargo pricing information ~~said central controller receiving information which includes~~ comprising: first information describing a number of weeks before departure, second information concerning the ~~historical~~ demand of this type of cargo space, and ~~third~~ information concerning the standard deviation of the ~~freight~~ cargo prices for ~~of the said route, and~~ fourth information on the current cargo price, ~~and~~ fifth information on the flexibility of the cargo arrival date, sixth information on the loading capacity of the transporter ~~at the time of query~~, seventh information on the predicted weather prevailing on the date of departure and arrival, eighth information on the timing of the transporter, ninth information on the type of cargo, tenth information on the type of transporter selected, eleventh information ~~on the number of competition~~ on the route, twelfth information on the remaining payment .

~~final price payable, thirteenth information on weighted average cost of capital of service provider and wherein said program in central controller is further means to use at least one of said first information, said second information, said third information, said fourth information, said fifth information, said sixth information, said seventh information, said eighth information, said ninth information, said tenth information, said eleventh information, said twelfth information, said thirteenth information to calculate the cargo service option fee.~~

42. (Currently Amended) The method according to claim 39, further comprising:

~~the~~ steps of receiving an indication that a user has purchased or sold the cargo option ~~contract~~;

updating a customer database to record the sale or purchase of the cargo option contract; and posting transaction details ~~to a transaction database~~ accessible by all users.

43. (Currently Amended) The method according to claim 39, further comprising the step of:

Application number: 09/376381   Art Unit: 3628
Applicant: Khai Hee Kwan   Examiner: Debra F Charles.
Title: Method, apparatus and program for pricing, transferring, buying, selling and exercising of freight cargo options on the World Wide Web.

~~receiving a user request for information on cargo pricing;~~
~~providing such information for a fixed route and type of cargo;~~
receiving a user's request in the form of shipping information to purchase an existing
cargo option ~~contract~~;

~~querying the connected cargo systems for interest in the user's request;~~
~~receiving responses if any from cargo systems via central controller with a range of prices~~
~~for contracts closely matching shipping information;~~

scanning for any other ready seller matching at that price or lower in ~~open~~ cargo option
database accessible to all users;

~~receiving acceptance of the selected price of the option contract (s) from the user;~~

~~checking for acceptance of the transaction again with seller;~~
~~displaying the full option contract for user to agree at user's terminal;~~
~~upon agreement~~ if available, performing a payment transaction through a nominated bank

B1

Application number: 09/376381   Art Unit: 3628
Applicant: Khai He   Kwan   Examiner: Debra F Charles.
Title: Method, apparatus and program for pricing, transferring, buying, selling and
exercising of freight cargo options on the World Wide Web.

posting settlement details to a transaction database which is accessible to all users over
the network.

46. (Currently Amended) The method according to claim 39 whereby the central
controller is an electronic cargo option exchange. 40, wherein the calculating steps of
the option fee is
based at least in part on the formula:
a = Log(CP/FP)
b = (BR + 0.5 * SD ^2) * TY
c = SD * (TY ^0.5)
d1 = (a + b)/c
d2 = d1 - SD * (TY ^0.5)
Cargo Option Fee = (CP * SNorm(d1) - FP * Exp(-BR * TY) * SNorm(d2))* L *
LD*R* W*T*Q*A*CO
Function SNorm(z)
c1 = 2.506628 s
c2 = 0.3193815
c3 = -0.3565638
c4 = 1.7814779
c5 = -1.821256
c6 = 1.3302744
If z > 0 Or z = 0 Then
w = 1
Else w = -1
End If
y = 1 / (1 + 0.2316419 * w * z)
SNorm = 0.5 + w * (0.5 - (Exp(-z * z / 2) / c1) * (y * (c2 + y * (c3 + y * (c4 + y *
(c5 + y * c6))))))
End Function

where L is the factor related to load capacity, TY in Years to departure, FP is the Final
Price Payable, BR is the Borrowing Rate of service provider, LD is a factor concerning
the historical demand for this type of cargo space, R is a factor concerning flexibility of
cargo arrival date, SD is the instantaneous standard deviation of the freight cargo prices
as measured in logarithmic returns, CP is the current cargo price, W is a factor
concerning the weather on the departure date and arrival date, T is a factor concerning
timing of departure date such as in holiday period or otherwise, Q is factor for type of
cargo including weight, dimensions, A is for type of transporter and CO is for number of
competition on the same route;

wherein the calculating step of said program in said memory in cargo system calculates
the standard deviation of the freight cargo prices or implicitly from transacted option fee

Application number: 09/376381   Art Unit: 3628
Applicant: Khai Hee Kwan   Examiner: Debra F Charles.
Title: Method, apparatus and program for pricing, transferring, buying, selling and exercising of freight cargo options on the World Wide Web.

~~of similar terms; and wherein the calculating step in said program in said memory in cargo system calculates the base price at least in part on the formula:~~

~~Base Price = (CP*(1-FP/CP))*((1+BR)^N)~~
~~where CP is the current price of the cargo service for the route, FP is the final price payable to settle the contract, BR is the Borrowing Rate in percentage divided by 100 and N is number of weeks to providing service as a factor of year.~~

47.(CURRENTLY DELETED)

48. (Currently Amended) A computer-readable medium storing cComputer executable program implementing the method of claim 39.

~~at the controller with steps operative to control a computer, receive input from terminal devices, query cargo systems, receive input from cargo system(s), stored all inputs on a computer-readable medium for determining a option~~
~~fee to purchase a contractual right but not the obligation to secure a cargo shipping service, display all open option contracts, both bid and offer quotations online over a network comprising:~~

~~a step of receiving final price payable, destination of cargo, arrival date of cargo, departure date, departure location, flexibility of arrival date, type of cargo, and route criteria, collectively known as user's shipping information;~~
~~a step of sending user's shipping information to a plurality of connected cargo systems;~~
~~a step of discovering suitability of requester/user at a cargo system as in claim 47;~~
~~a step to receive the number of weeks before departure date(s) assigned by cargo system and assign a factor in years at the controller;~~
~~a step to receive and assign the historical demand factor for type of cargo space on the requested route at central controller;~~
~~a step to receive the standard deviation of freight cargo prices from cargo system at the controller;~~
~~a step of receiving the current price of cargo from cargo system at central controller;~~
~~a step to receive and assigned the flexibility factor as sent by the user at central controller;~~
~~a step of receiving loading capacity data of selected transporter from cargo system and assign a factor at central controller;~~
~~a step to assign a factor to the predicted weather on the departure date(s) and corresponding arrival date(s) as provided by cargo system at the controller;~~
~~a step to assign a factor to the timing of the transporter's departure date such as in holiday period or otherwise at the controller;~~
~~a step to assign a factor to the type of cargo at the controller;~~
~~a step to assign a factor to the type of transporter at the controller;~~
~~a step to receive weighted average cost of capital of service provider at the controller;~~

Page 16 of 20

Application number: 09/376381
Applicant: Khai Hee Kwan
Title: Method, apparatus and program for pricing, transferring, buying, selling and exercising of freight cargo options on the World Wide Web.

Art Unit: 3628
Examiner: Debra F Charles.

~~a step to receive final price payable at the controller;~~
~~a step to assign a factor as determine by the controller as to the number or competitors for this route as determine by the number of cargo system queried and returning satisfactory responses;~~

~~a step to execute the program to calculate the option fee;~~
~~a step to output the option fee;~~
~~a step to ask the user to accept or reject this option fee;~~
~~where user accept this option fee(s), a step to query the selected service provider to confirm before completing the acceptance;~~
~~a step to display the complete option-contract at said fee to user for agreement or rejection;~~
~~a step to receive from user either agreement or rejection;~~
~~upon agreement, a step to complete bank payment by debiting funds from buyer's and crediting seller's accounts;~~

~~a step to update option contract in purchaser and seller accounts;~~
~~a step to update option details in transaction database accessible by other users;~~
~~where user reject this option fee or fee(s), a step to provide the user to change the initial shipping criteria;~~
~~and where user cancel this option fee or fee(s), a step to provide this option contract(s) and arranged them to be available to other users for a limited period.~~

49. (Currently Amended) A method of electronically pricing ~~a option fee, originating,~~ pricing and purchasing a cargo option ~~contract~~ from at least one cargo ~~service provider~~ system connected to a central controller for a cargo ~~freight route~~ over a network, comprising the steps of:

~~checking cargo fee by providing route and type of cargo to central controller;~~
~~receiving selected tentative cargo fee including last done price from central controller;~~
inquiring the cargo option fee price by providing shipping information to ~~a plurality of~~ at least one cargo systems via central controller over a network by user;
~~calculate base price at cargo system;~~
determining suitability of shipping information by cargo systems;
in response to ~~sending~~ cargo pricing information to received by central controller by ~~cargo systems;~~
calculating cargo option ~~fee(s)~~ price(s) at central controller;
~~receiving said option fee(s) through central controller from responsive cargo system over a network;~~

outputting the cargo option price(s) for consideration by the user;

receiving an offer by user to purchase the cargo option ~~contract~~ satisfying said shipping information over a network;

Application number: 09/376381   Art Unit: 3628
Applicant: Khai Hee Kwan   Examiner: Debra F Charles.
Title: Method, apparatus and program for pricing, transferring, buying, selling and exercising of freight cargo options on the World Wide Web.

~~conforming with seller on the selected option contract again;~~
~~displaying the option contract for agreement or rejection by user;~~
~~upon agreement, purchasing said contract at said option fee;~~
initiating payment instructions to respective banking accounts _of buyer and seller to credit the seller and debit the buyer_;
upon confirmation of payment, updating both buyer and seller accounts; and
updating ~~transaction~~ _cargo option_ database where _cargo option_ data is available to other users; _and_

whereby cargo is serviced by air, rail, sea or space carriers.

50. (Currently Amended) The method according to claim 49, further including the step of using said _cargo_ option ~~contract~~ to settle ~~final~~ _remaining_ payment to secure the ~~freight~~ cargo service with the particular cargo service provider.

51. (Currently Amended) The method according to claim 49, wherein said step of ~~checking cargo fee and~~
~~inquiring on option fee includes~~ providing shipping information ~~such as final price~~ payable _comprising:_ ~~:~~ destination of cargo, arrival date of cargo, departure date, departure location, flexibility of arrival date, type of cargo, _remaining payment_, and route criteria ~~or ranges of said in searchable format~~ over the network via a terminal device.

52. (Currently Amended) A network system _implementing the method of claim 49._ ~~for originating, selling a option contract to secure a particular cargo service at a particular final price for a particular route within a fixed period over a network, comprising:~~

~~having a plurality of terminal devices means to communicate with a central controller;~~
~~having said central controller using a communication means to provide tentative cargo pricing and last done prices to terminal devices based on such a request;~~
~~having said central controller using a communication means to communicate with a plurality of cargo systems with shipping information from said terminal devices, to receive data from cargo systems and to determine a fee for a option contract to secure a freight cargo services within a future date;~~
~~wherein said user terminal device to transmit to the central controller shipping information comprising the final price payable, destination of cargo, arrival date of cargo, departure date, departure location, flexibility of arrival date, type of cargo, and route criteria; wherein said central controller linking and querying each cargo systems with said user's shipping information determining the number of cargo system responses, said responsive cargo system is adopted means to respond by transmitting to central controller the current price and cargo information factors relating to such as current loading capacity of a chosen transporter, historical demand for this type of cargo space, the current standard deviation of freight cargo prices up to request time for this service route, acceptable weather data on chosen departure and arrival date(s), data on~~

Application number: 09/376381   Art Unit: 3628
Applicant: Khai Hee Kwan   Examiner: Debra F Charles.
Title: Method, apparatus and program for pricing, transferring, buying, selling and
exercising of freight cargo options on the World Wide Web.

~~coincidence of departure date with any public holiday or weekends, the type of selected
transporter on this route, final price payable by user, weighted average cost of capital of
service provider; and
having said user terminal device to receive from the central controller the option fee(s) as
calculated from said data, from at least one service provider or other users with option
contracts listed for sale satisfying user's inputs.~~

53. (Currently Amended) A network system implementing the method of claim 50. ~~The
system according to claim 52, wherein:
having said terminal device is adapted to transmit a user request to purchase the selected
option contract;~~

~~having said central controller to confirm with seller offering the selected contract;
having said central controller displaying the complete option contract for agreement or
rejection by user;~~

~~upon agreement, having said central controller to perform a payment transaction by
debiting the bank account of the user and crediting the bank account of the seller cargo
service provider; and
having said terminal device adapted to transmit a user request to settle the option contract
according to the terms of option contract by performing a final payment transaction by
debiting the bank account of the user and crediting the bank account of the seller cargo
service provider.~~

54. (Currently Amended) ~~The system according to claim 52, wherein:~~ A network system
for selling an existing cargo option between one user to another user over a network,
comprising:

a central controller adapted to implement the steps of:

having a seller list existing cargo option in database for sale ~~user sell existing option
contracts with attached terms and conditions by listing them in database~~;
having a buyer select the cargo option ~~contract(s)~~ and confirm selection;
~~displaying the complete option contract for agreement or rejection by user;~~
~~upon agreement~~ confirmation, performing payment transaction to credit the payment
~~from~~ to the seller of the said ~~contracts~~ cargo option and ~~debit~~ the account of the buyer;
~~updating all the entries by assigning the seller's contractual rights to the new buyer;~~
notifying the cargo system of the cargo service provider of the selected cargo option;
updating the database for seller, ~~new~~ buyer and service provider's accounts to reflect the
changed in ownership and contractual rights ~~and mutual obligations~~; and
updating the transaction database with the transaction details accessible by all users
online. ~~; and~~
~~having said central controller receiving a fee for its services from the service provider.~~

Page 19 of 20

Application number: 09/376381   Art Unit: 3628
Applicant: Khai Hee Kwan   Examiner: Debra F Charles.
Title: Method, apparatus and program for pricing, transferring, buying, selling and exercising of freight cargo options on the World Wide Web.

55 (NEW) A computer system for cargo service provider to manage cargo space by implementing the method of Claim 32.

56. (NEW) A method for cargo service provider to electronically offer a cargo option, the method comprising the steps of:

receiving shipping information from a user;

querying at least one carrier cargo system based on user's input;

if accepted by cargo system response with cargo pricing information;

in response to cargo pricing information, calculating the cargo option price that gives the user the contractual right but not obligation to secure within a future period said period equal or less to the period before the selected departure date, the underlying cargo shipping services for a particular route, for a particular service which satisfied the user's shipping information and the cargo pricing information provided by corresponding cargo system;

outputting cargo option price to the user and update the database where said priced cargo option is available for predetermined period to other users if not selected by first user; and

whereby cargo shipping services is by air, rail, sea or space transporters.

57. (NEW) A system for cargo service provider to electronically offer a cargo option, the said system consisting at least one cargo system linked to a network implementing the method of claim 56.

** Note 56 & 57 from RCE application.

Page 20 of 20